

Datasheet for #sb8613 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

WARNING: Operating the laser with longer pulses, higher repetition rate, higher voltage or higher current than specified in this document may cause damage. It will result in loss of warranty, unless agreed upon with Alpes Lasers!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative bias and positive bias on the specific zones drawn below.

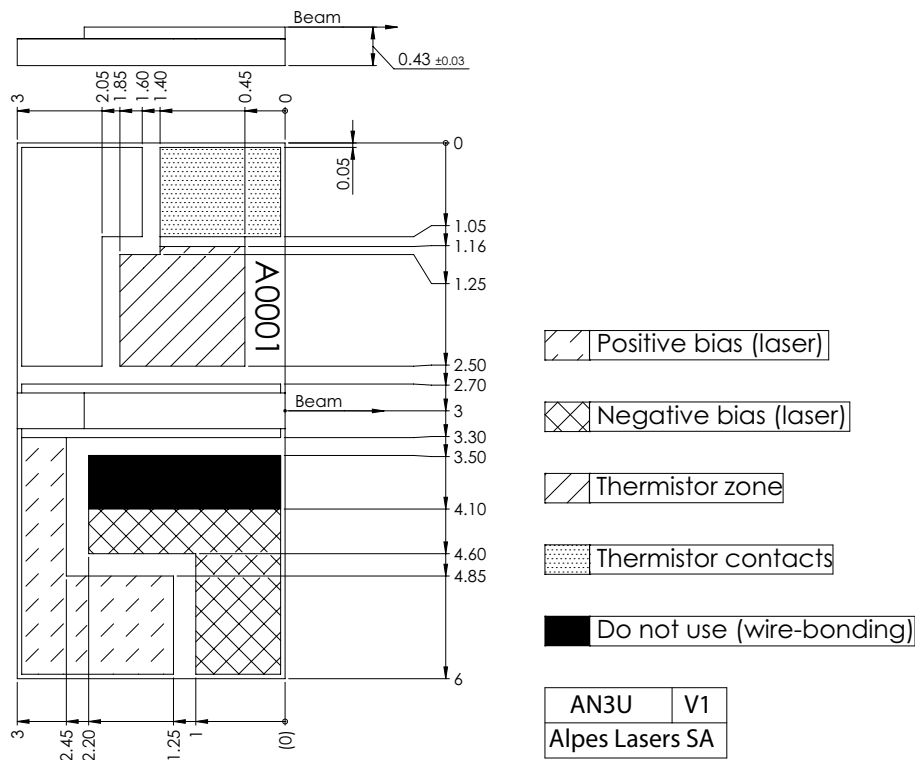


Figure 1: Support mounting for #sb8613 DN (please note that AlN submount numbering is A04J3)

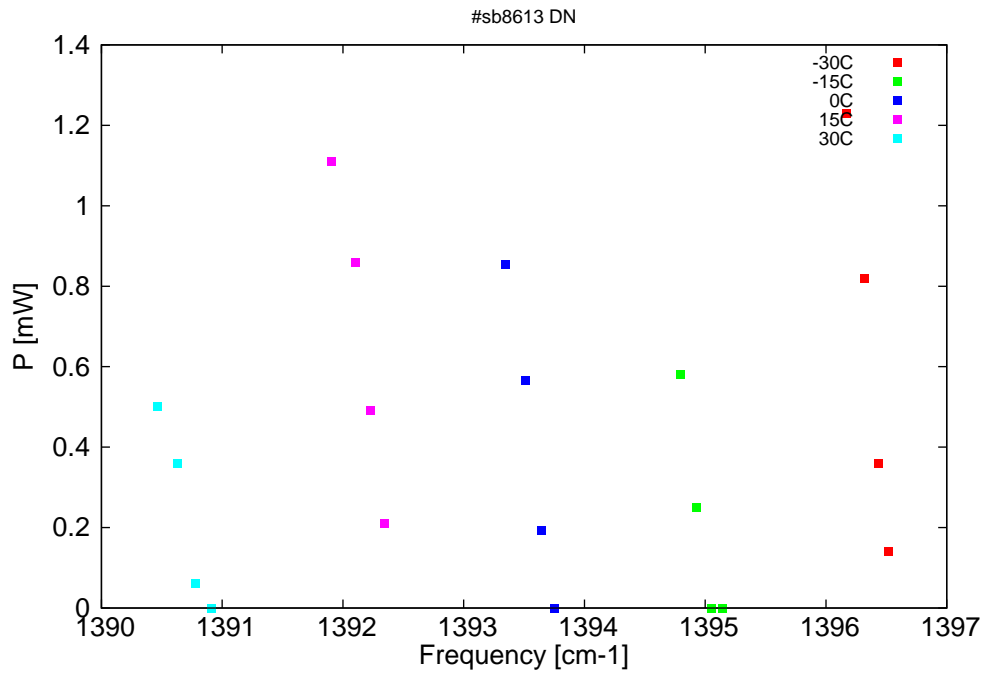


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

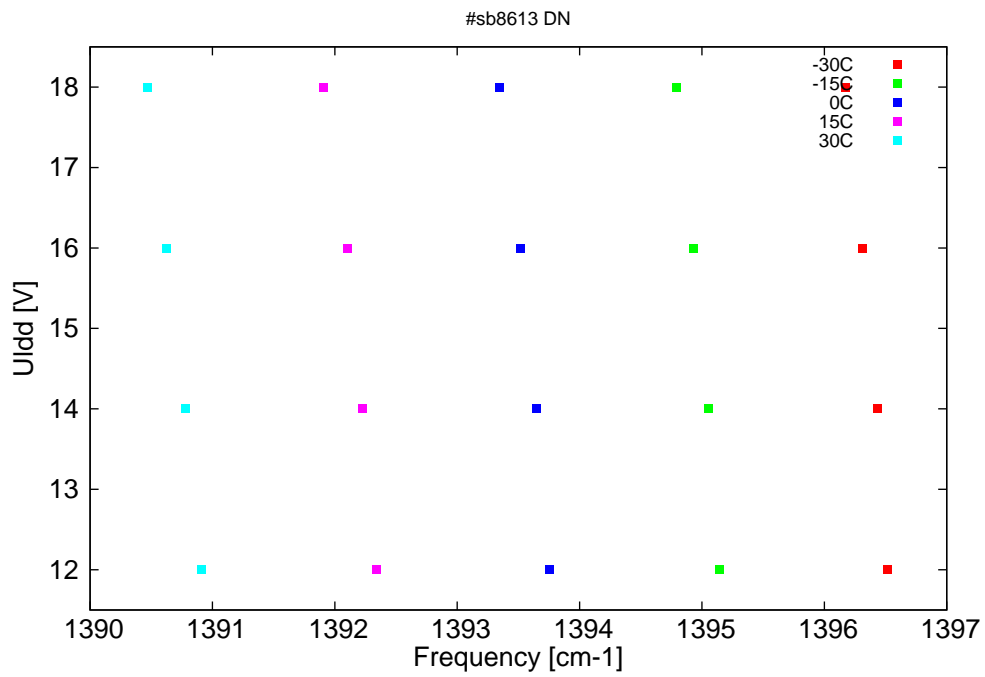


Figure 3: DC voltage fed to LDD (U_{ldd}) as a function of the singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LDD} [V]	I_{pulse} [A]
7160.7	1396.5	0.1	-30	12	0.16
7161.1	1396.4	0.4	-30	14	0.24
7161.7	1396.3	0.8	-30	16	0.32
7162.5	1396.2	1.2	-30	18	0.44
7167.7	1395.1	0	-15	12	0.18
7168.2	1395	0	-15	14	0.26
7168.8	1394.9	0.3	-15	16	0.36
7169.5	1394.8	0.6	-15	18	0.48
7174.9	1393.8	0	0	12	0.22
7175.4	1393.6	0.2	0	14	0.29
7176.1	1393.5	0.6	0	16	0.4
7177	1393.3	0.9	0	18	0.52
7182.1	1392.3	0.2	15	12	0.24
7182.7	1392.2	0.5	15	14	0.33
7183.4	1392.1	0.9	15	16	0.44
7184.4	1391.9	1.1	15	18	0.56
7189.5	1390.9	0	30	12	0.26
7190.2	1390.8	0.1	30	14	0.37
7191	1390.6	0.4	30	16	0.49
7191.8	1390.5	0.5	30	18	0.61

Table 1: Singlemode optical output power as function of operating parameters.

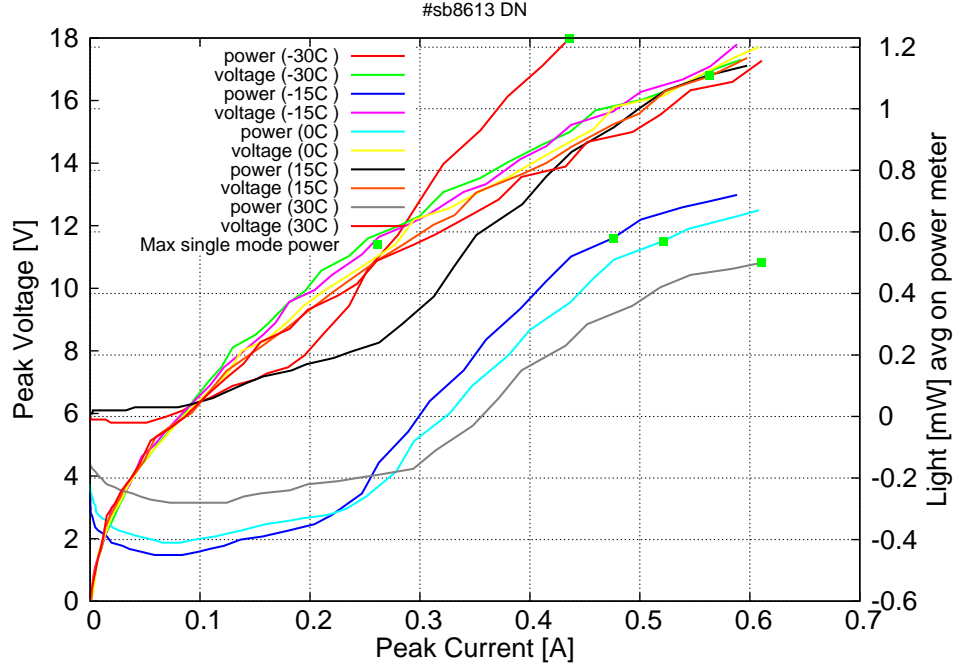


Figure 4: peak voltage and average power vs peak current at 2% duty-cycle (the solid squares indicate the maximum singlemode emitted power)

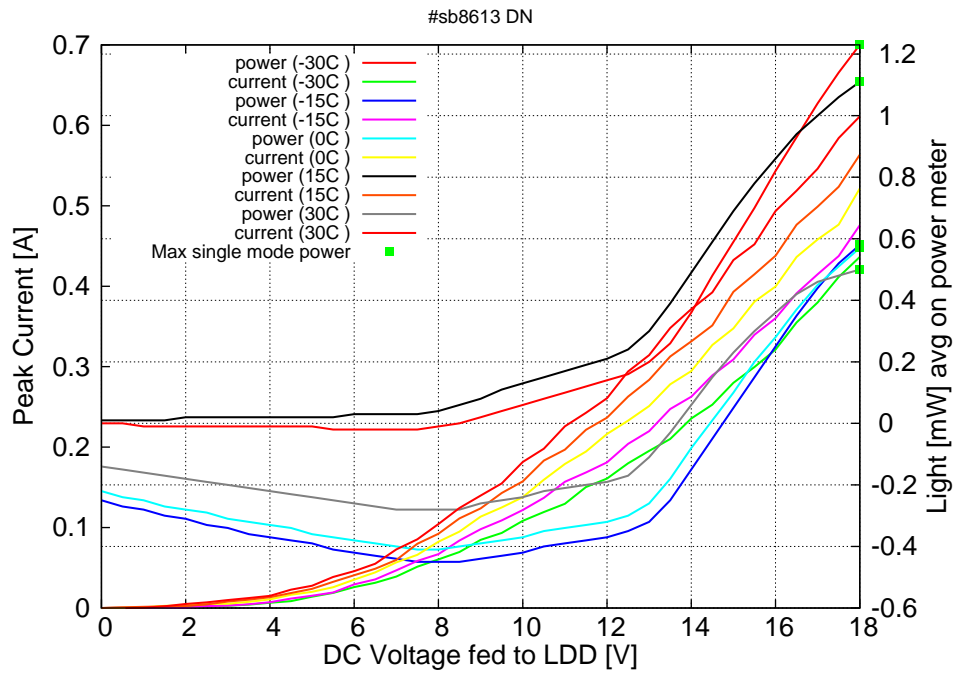
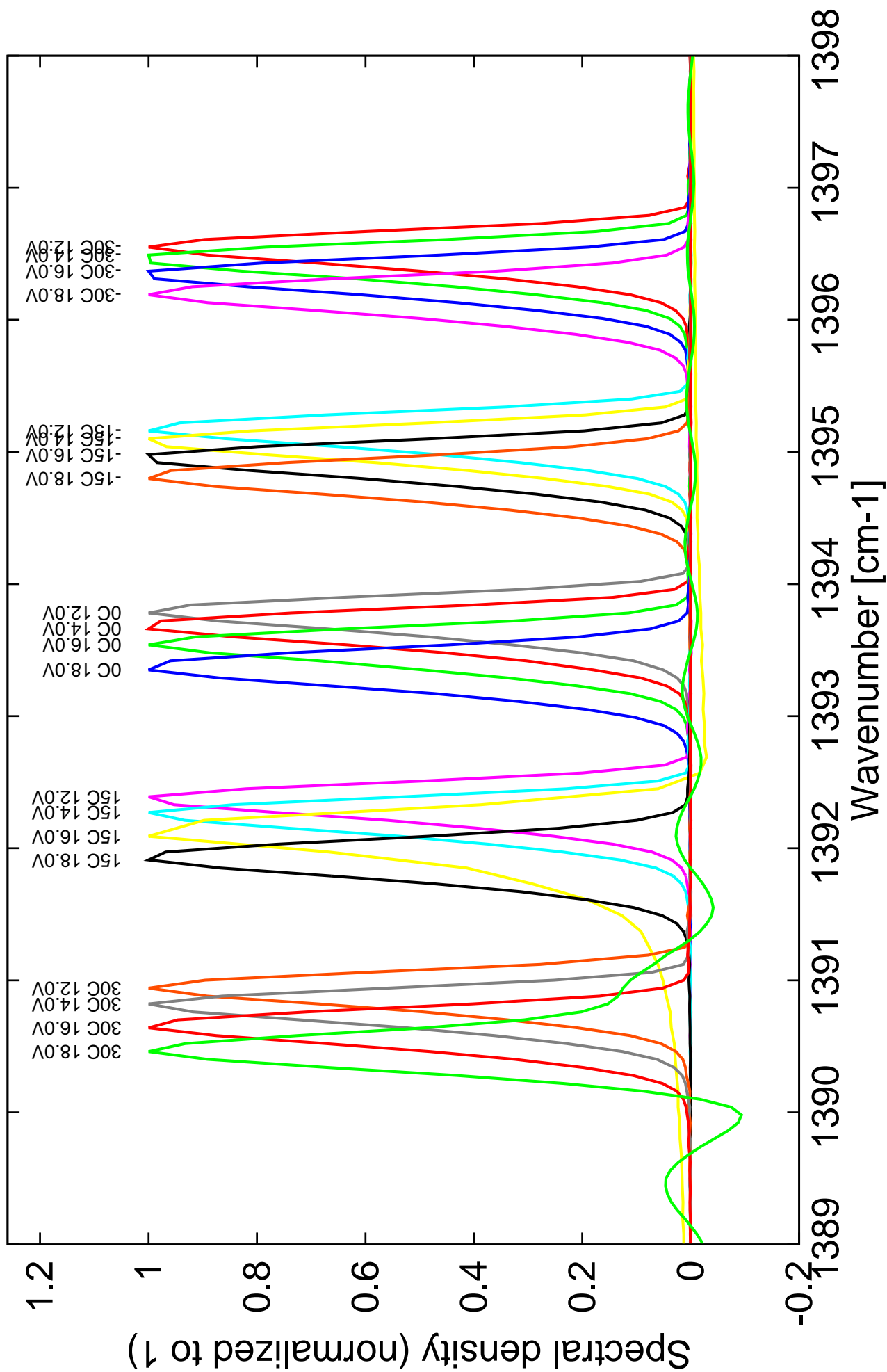


Figure 5: peak current and average power vs LDD voltage at 2% duty-cycle (50ns pulses on the laser, $2.5\mu\text{s}$ period) (the solid squares indicate the maximum singlemode emitted power)

Figure 4: spectra at different temperatures for various LDD voltages



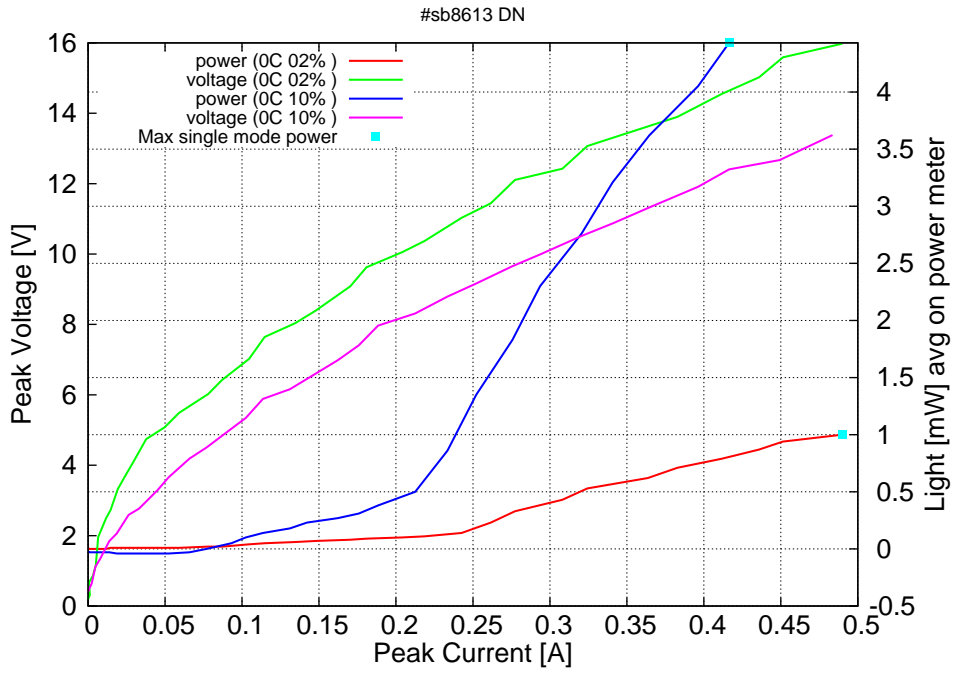


Figure 6: peak voltage and average power vs peak current at 0C for various duty-cycle (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

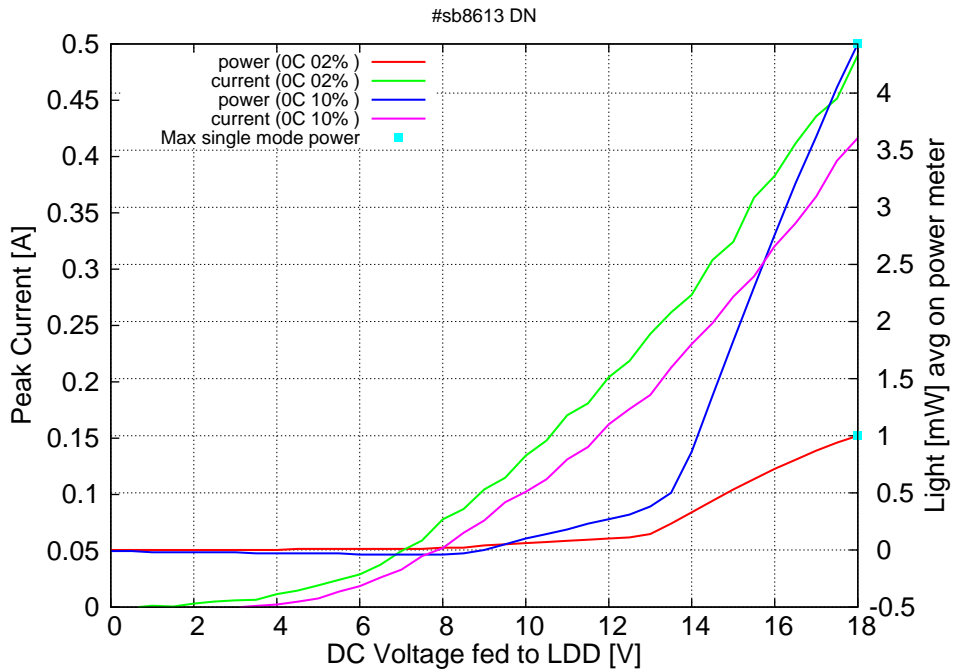


Figure 7: peak current and average power vs LDD voltage at 0C for various duty-cycle (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

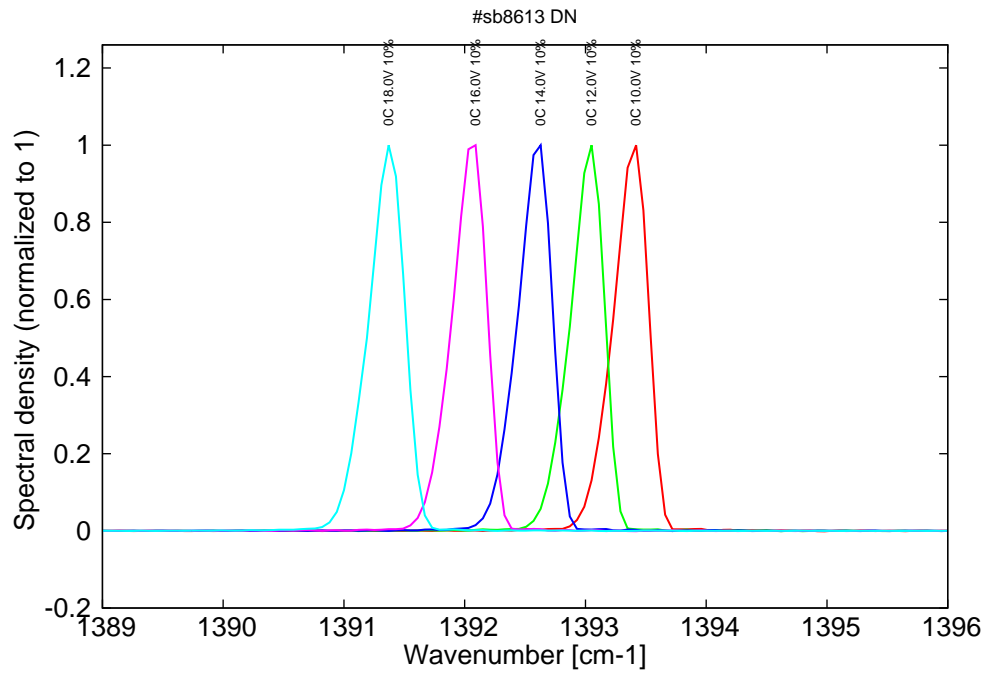


Figure 8: spectra at 0C at 10%dc for various LDD voltages